



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO.       |
|---|-------------|----------------------|---------------------|------------------------|
| 10/712,051  | 11/14/2003  | Tomoyuki Yambe       | 14521               | 9045                   |
| 293   | 7590        | 04/24/2006           |                     | EXAMINER               |
| Ralph A. Dowell of DOWELL & DOWELL P.C.<br>2111 Eisenhower Ave<br>Suite 406<br>Alexandria, VA 22314 |             |                      |                     | WYSZOMIERSKI, GEORGE P |
|   |             |                      | ART UNIT            | PAPER NUMBER           |
|   |             |                      | 1742                | A                      |

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/712,051             | YAMBE ET AL.        |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | George P. Wyszomierski | 1742                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 21 February 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,3,5,7,16,18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,3,5,7,16,18 and 20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

Art Unit: 1742

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 5, 7, 16, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sieminski et al. (U.S. patent 6,342,314) in view of Flomenblit et al. (U.S. Patent 5,562,641) or Dubrul (U.S. patent 5,944,701).

Sieminski discloses a device including a plurality of rings of shape memory alloy material (e.g. nickel-titanium alloy; see Sieminski column 13, lines 11-28) surrounding a tubular passageway and individually connected to an electric current, such that each ring may expand and contract and cause air to be moved through the passageway. Sieminski column 14, lines 3-4 states that the effect "resembles the peristaltic effect created by the muscular contraction and relaxation of intestines".

Sieminski differs from the claimed invention in that Sieminski does not specify the use of two-way shape memory materials, does not specify such materials in coil form, and is not directed to a device for use inside a human body. However,

a) The Flomenblit and Dubrul patents indicate that the nickel-titanium alloys employed by Sieminski are in fact two-way alloys; see Flomenblit column 2, lines 61-68 or Dubrul column 2, lines 4-6 and column 3, lines 65-67.

b) While Sieminski utilizes rings instead of coils, clearly one of ordinary skill in the art would easily have been able to construct a coil-shape material from the Ni-Ti alloy employed by Sieminski. The function of the material is the same regardless of its shape, i.e. the prior art utilizes the large amount of reversible deformation that occurs upon heating and cooling a

shape memory alloy in order to alternately constrict and open the flow path inside a tubular member, and a "coil" as presently claimed can be seen as nothing more than a connected set of rings as employed by Sieminski.

c) While Sieminski does not use the prior art devices inside a human body, Sieminski describes the motion created by the prior art devices as analogous to that which does occur inside a human body, in particular inside an intestine, in accord with the present claims.

Thus, the claimed invention would have been obvious to one of ordinary skill in the art from the disclosure of Sieminski et al., particularly in view of the fact that the alloys used by Sieminski are two-way shape memory alloys.

3. In a response filed February 21, 2006, Applicant alleges that the prior art does not teach any advantage resulting from the use of two-way shape memory alloys, and/or that the Sieminski reference is directed to a technology area that is widely separated from that of the present invention. Applicant's arguments have been carefully considered, but are not persuasive of patentability because it would appear that the alloys used by Sieminski are two-way alloys, as evidenced by Flomenblit or Dubrul, regardless of whether or not this was specified by Sieminski. With regard to the area of technology, Sieminski is admittedly directed to an area of art quite different from the present inventors. Yet column 14 of Sieminski describes an effect of the prior art technology that is substantially the same as that desired by the present Applicants, an effect achieved by using substantially the same materials in both the devices of the prior art and those of the present invention.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the new central facsimile number, (571)-273-8300. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GPW  
April 18, 2006

  
GEORGE WYSZOMIERSKI  
PRIMARY EXAMINER  
GROUP 1700